

>AB093549 ACCESSION:AB093549 NID: gi 23978421 dbj AB093549.1 Homo  
sapiens SCN1A mRNA for Voltage-gated sodium channel  
alpha1 subunit, complete cds, isoform type  
Length = 5997

Score = 4007 bits (10276), Expect = 0.0  
Identities = 1996/2009 (99%), Positives = 1996/2009 (99%), Gaps = 0/2009 (0%)  
Frame = +1

Query: 1 MEQTVLVPPGPD SFNFFTRESLAAIERRIAEKAKNPKPKDKDD DENGPKPNSDLEAGKN 60  
MEQTVLVPPGPD SFNFFTRESLAAIERRIAEKAKNPKPKDKDD DENGPKPNSDLEAGKN  
Sbjct: 1 MEQTVLVPPGPD SFNFFTRESLAAIERRIAEKAKNPKPKDKDD DENGPKPNSDLEAGKN 180

Query: 61 LPFIYGDIPPEMVSEPLEDLPYYINKKTFIVLNKGKAI FRFSATSALYILTPFNPLRKI 120  
LPFIYGDIPPEMVSEPLEDLPYYINKKTFIVLNKGKAI FRFSATSALYILTPFNPLRKI  
Sbjct: 181 LPFIYGDIPPEMVSEPLEDLPYYINKKTFIVLNKGKAI FRFSATSALYILTPFNPLRKI 360

Query: 121 AIKILVHSLF SMLIMCTILTNCVFMTMSNPPDWTKNVEYTF TGIYTFESLIKIIARGFCL 180  
AIKILVHSLF SMLIMCTILTNCVFMTMSNPPDWTKNVEYTF TGIYTFESLIKIIARGFCL  
Sbjct: 361 AIKILVHSLF SMLIMCTILTNCVFMTMSNPPDWTKNVEYTF TGIYTFESLIKIIARGFCL 540

Query: 181 EDFTFLRDPWNWLDFTVITFAYVTEFVDLGNVSALRTFRVLRALKTISVIPGLKTIVGAL 240  
EDFTFLRDPWNWLDFTVITFAYVTEFVDLGNVSALRTFRVLRALKTISVIPGLKTIVGAL  
Sbjct: 541 EDFTFLRDPWNWLDFTVITFAYVTEFVDLGNVSALRTFRVLRALKTISVIPGLKTIVGAL 720

Query: 241 IQSVKKLS DVMILTVFCLSVFALIGLQLFMGNLRNKCIQWPPTNASLEEHSIEKNITVNY 300  
IQSVKKLS DVMILTVFCLSVFALIGLQLFMGNLRNKCIQWPPTNASLEEHSIEKNITVNY  
Sbjct: 721 IQSVKKLS DVMILTVFCLSVFALIGLQLFMGNLRNKCIQWPPTNASLEEHSIEKNITVNY 900

Query: 301 NGTLINETVFEFDWKS YIQDSRYHYFLEGFLDALLCGNSSDAGQCPEGYMCVKAGRNP NY 360  
NGTLINETVFEFDWKS YIQDSRYHYFLEGFLDALLCGNSSDAGQCPEGYMCVKAGRNP NY  
Sbjct: 901 NGTLINETVFEFDWKS YIQDSRYHYFLEGFLDALLCGNSSDAGQCPEGYMCVKAGRNP NY 1080

Query: 361 GYTSFDTFSWAFSLFRLMTQDFWENLYQLTLRAAGKTYMIF FVLVIFLG SFYLINLILA 420  
GYTSFDTFSWAFSLFRLMTQDFWENLYQLTLRAAGKTYMIF FVLVIFLG SFYLINLILA  
Sbjct: 1081 GYTSFDTFSWAFSLFRLMTQDFWENLYQLTLRAAGKTYMIF FVLVIFLG SFYLINLILA 1260

Query: 421 VVAMAYEEQNQATLEEA EQKEAEFQQMIEQLKKQQEAAQQAATATASEHSREPSAAGR LS 480  
VVAMAYEEQNQATLEEA EQKEAEFQQMIEQLKKQQEAAQQAATATASEHSREPSAAGR LS  
Sbjct: 1261 VVAMAYEEQNQATLEEA EQKEAEFQQMIEQLKKQQEAAQQAATATASEHSREPSAAGR LS 1440

Query: 481 DSSSEASKLSSKSAKERRNRKRKQKEQSGGEEKDEDEFQKSESEDSIRRKGRFRFSIEG 540  
DSSSEASKLSSKSAKERRNRKRKQKEQSGGEEKDEDEFQKSESEDSIRRKGRFRFSIEG  
Sbjct: 1441 DSSSEASKLSSKSAKERRNRKRKQKEQSGGEEKDEDEFQKSESEDSIRRKGRFRFSIEG 1620

Query: 541 NRLTYEKRYSSPHQSLLSIRGSLFSPRRNSRTSLFSFRGRAKDVGSENFADDEHSTFED 600  
NRLTYEKRYSSPHQSLLSIRGSLFSPRRNSRTSLFSFRGRAKDVGSENFADDEHSTFED  
Sbjct: 1621 NRLTYEKRYSSPHQSLLSIRGSLFSPRRNSRTSLFSFRGRAKDVGSENFADDEHSTFED 1800

Query: 601 NESRRDSL FVPRRHGERRNSNLSQTSRSSRMLAVFPANGKMHSTVDCNGV VSLVGGPSVP 660  
NESRRDSL FVPRRHGERRNSNLSQTSRSSRMLAVFPANGKMHSTVDCNGV VSLVGGPSVP  
Sbjct: 1801 NESRRDSL FVPRRHGERRNSNLSQTSRSSRMLAVFPANGKMHSTVDCNGV VSLVGGPSVP 1980

Query: 661 TSPVGQLLPEV IIDKPATDDNGTTTETEMRKRSSSFHVSMDFLEDPSQRQRAMSIASIL 720  
TSPVGQLLPE GTTTETEMRKRSSSFHVSMDFLEDPSQRQRAMSIASIL  
Sbjct: 1981 TSPVGQLLPE-----GTTTETEMRKRSSSFHVSMDFLEDPSQRQRAMSIASIL 2127

Query: 721 TNTVEELEESRQKCPWCYKFSNIFLIWDCSPYWLKVKHVNLVMDPFVDLAITICIVL 780  
 Sbjct: 2128 TNTVEELEESRQKCPWCYKFSNIFLIWDCSPYWLKVKHVNLVMDPFVDLAITICIVL 2307

Query: 781 NTLFMAMEHYPMTHFNVLTVGNLVFTGIFTAEMFLKIIAMPYFFFQEGWNIFDGFIV 840  
 NTLFMAMEHYPMTHFNVLTVGNLVFTGIFTAEMFLKIIAMPYFFFQEGWNIFDGFIV  
 Sbjct: 2308 NTLFMAMEHYPMTHFNVLTVGNLVFTGIFTAEMFLKIIAMPYFFFQEGWNIFDGFIV 2487

Query: 841 TLSLVELGLANVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGNSVGALGNLTLVLAI 900  
 TLSLVELGLANVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGNSVGALGNLTLVLAI  
 Sbjct: 2488 TLSLVELGLANVEGLSVLRSFRLLRVFKLAKSWPTLNMLIKIIGNSVGALGNLTLVLAI 2667

Query: 901 VFIFAVVGMQLFGKSYKDCVCKIASDCQLPRWHMNDFFHSFLIVFRVLCGEWIETMWDCM 960  
 VFIFAVVGMQLFGKSYKDCVCKIASDCQLPRWHMNDFFHSFLIVFRVLCGEWIETMWDCM  
 Sbjct: 2668 VFIFAVVGMQLFGKSYKDCVCKIASDCQLPRWHMNDFFHSFLIVFRVLCGEWIETMWDCM 2847

Query: 961 EVAGQAMCLTVFMMVMVIGNLVVLNLFLLALLXSSFSADNLAATDDDNEMNNLQIAVDRMH 1020  
 EVAGQAMCLTVFMMVMVIGNLVVLNLFLLALL SSFSADNLAATDDDNEMNNLQIAVDRMH  
 Sbjct: 2848 EVAGQAMCLTVFMMVMVIGNLVVLNLFLLALLXSSFSADNLAATDDDNEMNNLQIAVDRMH 3027

Query: 1021 KGVAYVKRKIYEFIQQSFIKQKILDEIKPLDDLNNKKDSCMSNHTXEIGKDL DYLDKDVN 1080  
 KGVAYVKRKIYEFIQQSFIKQKILDEIKPLDDLNNKKDSCMSNHT EIGKDL DYLDKDVN  
 Sbjct: 3028 KGVAYVKRKIYEFIQQSFIKQKILDEIKPLDDLNNKKDSCMSNHTTEIGKDL DYLDKDVN 3207

Query: 1081 GTTSGIGTGSSVEKYIIDESDYMSFINNPSLTVTVPIAVGESDFENLNTEDFSSES DLEE 1140  
 GTTSGIGTGSSVEKYIIDESDYMSFINNPSLTVTVPIAVGESDFENLNTEDFSSES DLEE  
 Sbjct: 3208 GTTSGIGTGSSVEKYIIDESDYMSFINNPSLTVTVPIAVGESDFENLNTEDFSSES DLEE 3387

Query: 1141 SKEKLNSSSSSSEGSTVDIGAPVEEQPVVEPEETLEPEACFTEGCVQRFKCCQINVEEGR 1200  
 SKEKLNSSSSSSEGSTVDIGAPVEEQPVVEPEETLEPEACFTEGCVQRFKCCQINVEEGR  
 Sbjct: 3388 SKEKLNSSSSSSEGSTVDIGAPVEEQPVVEPEETLEPEACFTEGCVQRFKCCQINVEEGR 3567

Query: 1201 GKQWWNLRRTCFRIVEHNNWFETFIVFMILLSSGALAFEDIYIDQRKTIKTMLEYADKVFT 1260  
 GKQWWNLRRTCFRIVEHNNWFETFIVFMILLSSGALAFEDIYIDQRKTIKTMLEYADKVFT  
 Sbjct: 3568 GKQWWNLRRTCFRIVEHNNWFETFIVFMILLSSGALAFEDIYIDQRKTIKTMLEYADKVFT 3747

Query: 1261 YIFILEMLLKWVAYGYQTYFTNAWCWLDFLIVDVSLVSLTANALGYSELGAIKSLRTLRA 1320  
 YIFILEMLLKWVAYGYQTYFTNAWCWLDFLIVDVSLVSLTANALGYSELGAIKSLRTLRA  
 Sbjct: 3748 YIFILEMLLKWVAYGYQTYFTNAWCWLDFLIVDVSLVSLTANALGYSELGAIKSLRTLRA 3927

Query: 1321 LRPLRALSRFEGMRVVNALLGAIPSIMNVLLVCLIFWLIFSIMGVNLFAGKFYHCINTT 1380  
 LRPLRALSRFEGMRVVNALLGAIPSIMNVLLVCLIFWLIFSIMGVNLFAGKFYHCINTT  
 Sbjct: 3928 LRPLRALSRFEGMRVVNALLGAIPSIMNVLLVCLIFWLIFSIMGVNLFAGKFYHCINTT 4107

Query: 1381 TGDRFDIEDVNNHTDCLKLIERNETARWKNVKVNFNDVGFYLSLLQVATFKGWMDIMYA 1440  
 TGDRFDIEDVNNHTDCLKLIERNETARWKNVKVNFNDVGFYLSLLQVATFKGWMDIMYA  
 Sbjct: 4108 TGDRFDIEDVNNHTDCLKLIERNETARWKNVKVNFNDVGFYLSLLQVATFKGWMDIMYA 4287

Query: 1441 AVDSRNVELQPKYEESLYMYLYFVIFIIFGSFFTLNLFIGVIIDNFNQQKKKFGGQDIFM 1500  
 AVDSRNVELQPKYEESLYMYLYFVIFIIFGSFFTLNLFIGVIIDNFNQQKKKFGGQDIFM  
 Sbjct: 4288 AVDSRNVELQPKYEESLYMYLYFVIFIIFGSFFTLNLFIGVIIDNFNQQKKKFGGQDIFM 4467

Query: 1501 TEEQKKYYNAMKKLGSKKPKPIPRPGNKFQGMVDFVTRQVFDISIMILICLNMTMMV 1560  
 TEEQKKYYNAMKKLGSKKPKPIPRPGNKFQGMVDFVTRQVFDISIMILICLNMTMMV  
 Sbjct: 4468 TEEQKKYYNAMKKLGSKKPKPIPRPGNKFQGMVDFVTRQVFDISIMILICLNMTMMV 4647

Query: 1561 ETDDQSEYVTTILSRINLVFIVLFTGECVLKLISLRHYYFTIGWNIFDFV VVILSIVGMF 1620  
 ETDDQSEYVTTILSRINLVFIVLFTGECVLKLISLRHYYFTIGWNIFDFV VVILSIVGMF  
 Sbjct: 4648 ETDDQSEYVTTILSRINLVFIVLFTGECVLKLISLRHYYFTIGWNIFDFV VVILSIVGMF 4827

Query: 1621 LAELIEKYFVSPTLFRVIRLARIGRILRLIKGAKGIRTLLFALMMSLPALFNIGLLLFLV 1680  
 LAELIEKYFVSPTLFRVIRLARIGRILRLIKGAKGIRTLLFALMMSLPALFNIGLLLFLV  
 Sbjct: 4828 LAELIEKYFVSPTLFRVIRLARIGRILRLIKGAKGIRTLLFALMMSLPALFNIGLLLFLV 5007

Query: 1681 MFIYAIFGMSNFAYVKREVGIDDMFNFETFGNSMICLFQITTSAGWDGLLAPILNSKPPD 1740  
 MFIYAIFGMSNFAYVKREVGIDDMFNFETFGNSMICLFQITTSAGWDGLLAPILNSKPPD  
 Sbjct: 5008 MFIYAIFGMSNFAYVKREVGIDDMFNFETFGNSMICLFQITTSAGWDGLLAPILNSKPPD 5187

Query: 1741 CDPNKVNP GSSVKGDCGNPSVGIFFFVSYIIISFLVVVNM YIAVILENFSVATEESAEP L 1800  
 CDPNKVNP GSSVKGDCGNPSVGIFFFVSYIIISFLVVVNM YIAVILENFSVATEESAEP L  
 Sbjct: 5188 CDPNKVNP GSSVKGDCGNPSVGIFFFVSYIIISFLVVVNM YIAVILENFSVATEESAEP L 5367

Query: 1801 SEDDFEMFYEVWEKFDPDATQFMEFEKLSQFAAALEPPLNLPQPNKLQLIAMDLPMVSGD 1860  
 SEDDFEMFYEVWEKFDPDATQFMEFEKLSQFAAALEPPLNLPQPNKLQLIAMDLPMVSGD  
 Sbjct: 5368 SEDDFEMFYEVWEKFDPDATQFMEFEKLSQFAAALEPPLNLPQPNKLQLIAMDLPMVSGD 5547

Query: 1861 RIHCLDILFAFTKRVLGESGEMDALRIQMEERFMASNPSKVSYPITTT LKRKQEEVSAV 1920  
 RIHCLDILFAFTKRVLGESGEMDALRIQMEERFMASNPSKVSYPITTT LKRKQEEVSAV  
 Sbjct: 5548 RIHCLDILFAFTKRVLGESGEMDALRIQMEERFMASNPSKVSYPITTT LKRKQEEVSAV 5727

Query: 1921 IIQRAYRRHLLKRTVKQASFTYNKNKIKGGANLLIKEDMIIDRINENSITEKTDLT MSTA 1980  
 IIQRAYRRHLLKRTVKQASFTYNKNKIKGGANLLIKEDMIIDRINENSITEKTDLT MSTA  
 Sbjct: 5728 IIQRAYRRHLLKRTVKQASFTYNKNKIKGGANLLIKEDMIIDRINENSITEKTDLT MSTA 5907

Query: 1981 ACPPSYDRVTKPIVEKHEQEGKDEKAKGK 2009  
 ACPPSYDRVTKPIVEKHEQEGKDEKAKGK  
 Sbjct: 5908 ACPPSYDRVTKPIVEKHEQEGKDEKAKGK 5994



Entrez

PubMed

Nucleotide

Protein

Genome

Structure

PMC

Taxonomy

Books

Search  for 

Go

Clear

Limits

Preview/Index

History

Clipboard

Details

Display

Show:

Send to

Get Subsequence

Featur

☐ 1: [AB093549](#). Homo sapiens SCN1...[gi:23978421]

Links

LOCUS AB093549 5997 bp mRNA linear PRI 16-OCT-2002

DEFINITION Homo sapiens SCN1A mRNA for Voltage-gated sodium channel alpha1 subunit, complete cds, isoform type.

ACCESSION AB093549

VERSION AB093549.1 GI:23978421

KEYWORDS .

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1

AUTHORS Ouchida,M. and Ohmori,I.

TITLE Isoforms of human sodium channel SCN1A gene

JOURNAL Unpublished

REFERENCE 2

AUTHORS Ouchida,M. and Ohmori,I.

TITLE Isoforms of human sodium channel SCN1A gene

JOURNAL Published Only in Database (2002)

REFERENCE 3 (bases 1 to 5997)

AUTHORS Ouchida,M. and Ohmori,I.

TITLE Direct Submission

JOURNAL Submitted (11-OCT-2002) Mamoru Ouchida, Okayama University, Graduate School of Medicine and Dentistry, Department of Molecular Genetics; Shikata-cho 2-5-1, Okayama, Okayama 700-8558, Japan (E-mail:ouchidam@md.okayama-u.ac.jp, Tel:81-86-235-7379, Fax:81-86-235-7383)

FEATURES

source Location/Qualifiers

1..5997

/organism="Homo sapiens"

/mol\_type="mRNA"

/db\_xref="taxon:9606"

/chromosome="2"

/map="2q24"

/note="Codon 1056 is ACA(Thr) or Gca(Ala) as polymorphism~alternative splicing form~isoform mRNA"

gene 1..5997

/gene="SCN1A"

CDS 1..5997

/gene="SCN1A"

/codon\_start=1

/product="Voltage-gated sodium channel alpha1 subunit"

/protein\_id="BAC21102.1"

/db\_xref="GI:23978422"

/translation="MEQTVLVPPGPDSENFNFTRESLAAIERRIAEKAKNPKPKDKDD DENGPKPNSDLEAGKNLPFIYGDIPPEMVSEPLEDLPYYINKKTFIVLNKGKAIKFRF SATSALYILTFFNPLRKIAIKILVHSLFSMLIMCTILTNCVFMFTMSNPPDWTKNVEYFTGIYTFESLIKIIARGFCLEDFTFRLDPWNWLDFTVITFAYVTEFVDLGNVSALRTF

RVLRALKTISVIPGLKTIVGALIQSVKKLSVDMILTVFCLSVFALIGLQLFMGNLRNK  
 CIQWPPTNASLEEHSEIEKNITVNYNGTLINETVFEFDWKSYSIQDSRYHYFLEGFLDAL  
 LCGNSSDAGQCPEGYMCVKAGRPNPNYGYTSFDTFSWAFSLSLFRLMTQDFWENLYQLTL  
 RAAGKTYMIFVFLVIFLGSFYLINLILAVVAMAYEEQNQATLEEAEEQKEAEFQQMIEQ  
 LKKQQEAAQQAATATASEHSREPSAAGRLSDSSSEASKLSSKSAKERRNRKRKQKE  
 QSGGEEKDEDEFQKSESEDSIRRKGFRRFSIEGNRLTYEKRYSSPHQSLLSIRGSLFSP  
 RRNSRTSLFSFRGRAKDVGSSENFADDEHSTFEDNESRRDSLFPVPRRHGERNSNLSQ  
 TRSSRMLAVFPANGKMHSTVDCNGVSVSLVGGPSVPTSPVGQLLPEGTTTETEMRKRR  
 SSSFHVSMDFLEDPSQRQRAMSIASILTNTVEELEESRQKCPPCWYKFSNIFLIWDCS  
 PYWLKVKHVNLVVMDFVDLAITICIVLNTLFMAMEHYPMTHFNNVLTGVLNLFVTG  
 IFTAEMFLKIIAMDPIYFYFQEGWNI FDGFI VTL SLVELGLANVEGLSVLRSFRLLRVF  
 KLAKSWPTLNMLIKIIGNSVGALGNLTVLAIIVFIFAVVGMQLFGKSYKDCVCKIAS  
 DCQLPRWHMNDFFHSFLIVFRVLCGEWIETMWDCMEVAGQAMCLTVFMMVMVIGNLVV  
 LNLFLALLLSSFSADNLAATDDDNEMNNLQIAVDRMHKGVAIVKRKIYEFIQQSFIK  
 QKILDEIKPLDDLNNKKDSCMSNHTTEIGKDL DYLDVNGTTSIGIGTGSSVEKYIIDE  
 SDYMSFINNPSLTVTVPIAVGESDFENLNTEDFSSES DLEESKEKLNESSSSSSEGSTV  
 DIGAPVEEQPVVEPEETLEPEACFTGCVQRFKCCQINVEEGRGKQWWNLRRTCFRIV  
 EHNWFETFI VFMILLSSGALAFEDIYIDQRKTIKTMLEYADKVFTYIFILEMLLKWVA  
 YGYQTYFTNAWCWLDLIVDVSLVSLTANALGYSELGAIKSLRTLRLRPLRALS RFE  
 GMRVVVNALLGAIPSIMNVLLVCLIFWLIFSIMGVNLFAGKFYHCINTTTGDRFDIED  
 VNNHTDCLKLIERNETARWKNVKNFNDVNGFGYLSLLQVATFKGWDIMYAAVDSRNV  
 ELQPKYEEESLYMYLYFVIFIIFGSFFTLNLFIGVIIDNFNQKKKFGGQDIFMTEEQK  
 KYYNAMKKLGSKKPQKPIPRPGNKFGQMVFDVTRQVFDISIMILICLNMTMMVETD  
 DQSEYVTTILSRINLVFIVLFTGECVLKLI SLRHYYFTIGWNIFDFVVILSVGMFL  
 AELIEKYFVSPTLFRVIRLARIGRILRLIKGAKGIRTLFLALMMSLPALFNIGLLFL  
 VMFIYAIFGMSNFAYVKREV GIDDMFN FETFGNSMICLFQITTSAGWDGLLAPILNSK  
 PPDGDPNKVNPGSSVKGDCGNPSVGIFFFVSYIIISFLVVVNMVIAVILENFSVATEE  
 SAEPLEDDDFEMFYEVWEKFDPDATQFMEFEKLSQFAAALEPPLNLPQPNKLQLIAMD  
 LPMVSGDRIHCLDILFAFTKRVLGESGEMDALRIQMEERFMASNP SKVSYQPITTTLK  
 RKQEEVSAVIIQRAYRRHLLKRTVKQASFTYNKNKIKGGANLLIKEDMIIDRINENSI  
 TEKTDLTMTAACPPSYDRVTKPIVEKHEQEGKDEKAKGK"

## ORIGIN

1	atggagcaaa	cagtgtctgt	accaccagga	cctgacagct	tcaacttctt	caccagagaa
61	tctcttgagg	ctattgaaag	acgcattgca	gaagaaaagg	caaagaatcc	caaaccagac
121	aaaaaagatg	acgacgaaaa	tggcccaaag	caaataagtg	acttggaagc	tggaaagaac
181	cttccattta	tttatggaga	cattcctcca	gagatggtgt	cagagcccc	ggaggacctg
241	gaccctact	atatcaataa	gaaaactttt	atagtattga	ataaagggaa	ggccatcttc
301	cgggttcagt	ccacctctgc	cctgtacatt	ttaactccct	tcaatcctct	taggaaaata
361	gctattaaga	ttttggtaca	ttcattattc	agcatgctaa	ttatgtgcac	tattttgaca
421	aactgtgtgt	ttatgacaat	gagtaaccct	cctgattgga	caaagaatgt	agaatacacc
481	ttcacaggaa	tatatacttt	tgaatcactt	ataaaaaatta	ttgcaagggg	attctgttta
541	gaagatttta	ctttccttcg	ggatccatgg	aactggctcg	atttcactgt	cattacattt
601	gcgtacgtca	cagagtttgt	ggacctgggc	aatgtctcgg	cattgagaac	attcagagtt
661	ctccgagcat	tgaagacgat	ttcagtcatt	ccaggcctga	aaaccattgt	gggagccctg
721	atccagtcctg	tgaagaagct	ctcagatgta	atgacccctga	ctgtgttctg	tctgagcgta
781	tttgctctaa	ttgggctgca	gctgttcctg	ggcaacctga	ggaataaatg	tatacaatgg
841	cctcccacca	atgcttcctt	ggaggacaat	agtatagaaa	agaataatac	tgtgaattat
901	aatggtacac	ttataaatga	aactgtcttt	gagtttgact	ggaagtcata	tattcaagat
961	tcaagatata	attatttcct	ggagggtttt	ttagatgcac	tactatgtgg	aaatagctct
1021	gatgcaggcc	aatgtccaga	gggatatatg	tgtgtgaaag	ctggtagaaa	tcccaattat
1081	ggctacacaa	gctttgatac	cttcagttgg	gcttttttgt	ccttgtttcg	actaatgact
1141	caggacttct	gggaaaatct	ttatcaactg	acattacgtg	ctgctgggaa	aacgtacatg
1201	atattttttg	tattggtcat	tttcttgggc	tcattctacc	taataaattt	gaccttggt
1261	gtggtggcca	tggcctacga	ggaacagaat	caggccacct	tggagaagc	agaacagaaa
1321	gaggccgaat	ttcagcagat	gattgaacag	cttaaaaagc	aacaggaggc	agctcagcag
1381	gcagcaacgg	caactgcctc	agaacattcc	agagagccca	gtgcagcagg	caggctctca
1441	gacagctcat	ctgaagcctc	taagttgagt	tccaagagtg	ctaaggaaag	aagaaatcgg
1501	aggaagaaaa	gaaaacagaa	agagcagctc	ggtgggggaa	agaagatga	ggatgaattc
1561	caaaaatctg	aatctgagga	cagcatcagg	aggaaaggtt	ttcgcttctc	cattgaaggg
1621	aaccgattga	catatgaaaa	gagggtactcc	tccccacacc	agtccttgtt	gagcatccgt

```
1681 ggctccctat tttcaccaag gcgaaatagc agaacaagcc ttttcagctt tagagggcga
1741 gcaaaggatg tgggatctga gaacgacttc gcagatgatg agcacagcac ctttgaggat
1801 aacgagagcc gtagagattc cttgtttgtg ccccgacgac acggagagag acgcaacagc
1861 aacctgagtc agaccagtag gtcaccccgg atgctggcag tgtttccagc gaatgggaag
1921 atgcacagca ctgtggattg caatgggtgtg gtttccttgg ttggtggacc ttcagttcct
1981 acatcgctcg ttggacagct tctgccagag ggaacaacca ctgaaactga aatgagaaag
2041 agaaggctca gttctttcca cgtttccatg gactttctag aagatccttc ccaaaggcaa
2101 cgagcaatga gtatagccag cattctaaca aatacagtag aagaacttga agaatccagg
2161 cagaaatgcc caccctgttg gtataaattt tccaacatat tcttaatctg ggactgttct
2221 ccatattggt taaaagtga acatgttgtc aacctggttg tgatggaccc atttgttgac
2281 ctggccatca ccatctgtat tgtcttaaat actcttttca tggccatgga gcactatcca
2341 atgacggacc atttcaataa tgtgcttaca gtaggaaact tggttttcac tgggatcttt
2401 acagcagaaa tgtttctgaa aattattgcc atggatcctt actattattt ccaagaaggc
2461 tggaatatct ttgacggttt tattgtgacg cttagcctgg tagaacttgg actcgccaat
2521 gtggaaggat tatctgttct ccgttcattt cgattgctgc gagttttcaa gttggcaaaa
2581 tcttggccaa cgttaaatat gctaataaag atcatcgcca attccgtggg ggctctggga
2641 aatttaaccc tcgtcttggc catcatcgtc ttcatttttg ccgtggtcgg catgcagctc
2701 tttggtaaaa gctacaaaga ttgtgtctgc aagatcgcca gtgattgtca actcccacgc
2761 tggcacatga atgacttctt ccactccttc ctgatttgtt tccgcgtgct gtgtggggag
2821 tggatagaga ccatgtggga ctgtatggag gttgctggtc aagccatgtg ccttactgtc
2881 ttcattgatg tcatggtgat tggaaacctt gtggtcctga atctctttct ggccttgctt
2941 ctgagctcat ttagtgcaga caaccttgca gccactgatg atgataatga aatgaataat
3001 ctccaaattg ctgtggatag gatgcacaaa ggagtagctt atgtgaaaag aaaaatatat
3061 gaatttatct aacagtcctt cattaggaaa caaaagattt tagatgaaat taaaccactt
3121 gatgatctaa acaacaagaa agacagtgtt atgtccaatc atacaacaga aattgggaaa
3181 gatcttgact atcttaaaga tgtaaatgga actacaagtg gtataggaac tggcagcagt
3241 gttgaaaaat acattattga tgaaagtgat tacatgtcat tcataaaciaa cccagtcctt
3301 actgtgatcg taccaattgc tgtaggagaa tctgactttg aaaattttaa cagggaagac
3361 tttagtagtg aatcggtatc ggaagaaagc aaagagaaac tgaatgaaag cagtagctca
3421 tcagaaggta gcactgtgga catcggcgca cctgtagaag aacagcccgt agtggaaact
3481 gaagaaactc ttgaaccaga agcttgtttc actgaaggct gtgtacaaag attcaagtgt
3541 tgtcaaatca atgtggaaga aggcagagga aaacaatggt ggaacctgag aaggacgtgt
3601 ttccgaatag ttgaacataa ctggtttgag accttcattg ttttcatgat tctccttagt
3661 agtgggtgctc tggcatttga agatatatat attgatcagc gaaagacgat taagacgatg
3721 ttggaatatg ctgacaaggt tttcacttac attttcattc tggaaatgct tctaaaatgg
3781 gtggcatatg gctatcaaac atatttcacc aatgcctggt gttggctgga cttcttaatt
3841 gttgatgttt cattggctag tttaacagca aatgccttgg gttactcaga acttggagcc
3901 atcaaatctc tcaggacact aagagctctg agacctctaa gagccttatc tcgatttgaa
3961 gggatgaggg tggttgtgaa tgccctttta ggagcaattc catccatcat gaatgtgctt
4021 ctggtttgtc ttatattctg gctaattttc agcatcatgg gcgtaaattt gtttgctggc
4081 aaattctacc actgtattaa caccacaact ggtgacaggt ttgacatcga agacgtgaat
4141 aatcatactg attgcctaaa actaatagaa agaaatgaga ctgctcgatg gaaaacatgtg
4201 aaagtaaaact ttgataatgt aggatttggg tatctctctt tgcttcaagt tgccacattc
4261 aaaggatgga tggatataat gtatgcagca gttgattcca gaaatgtgga actccagcct
4321 aagtatgaag aaagtctgta catgtactct tactttgtta ttttcatcat ctttgggtcc
4381 ttcttcacct tgaacctgtt tattggtgtc atcatagata atttcaacca gcagaaaaag
4441 aagtttggag gtcaagacat ctttatgaca gaagaacaga agaaatacta taatgcaatg
4501 aaaaaattag gatcgaaaaa accgcaaaag cctataacct gaccaggaaa caaatttcaa
4561 ggaatggtct ttgacttcgt aaccagacaa gtttttgaca taagcatcat gattctcatc
4621 tgtcttaaca tggtcacaat gatggtggaa acagatgacc agagtgaata tgtgactacc
4681 attttgtcac gcatcaatct ggtgttcatt gtgctattta ctggagagtg tgtactgaaa
4741 ctcatctctc tacgccatta ttattttacc attggatgga atatttttga ttttgtggtt
4801 gtcattctct ccattgtagg tatgtttctt gccgagctga tagaaaagta tttcgtgtcc
4861 cctaccctgt tccgagtgat ccgtcttgct aggattggcc gaatcctacg tctgatcaaa
4921 ggagcaaagg ggateccgcac gctgctcttt gctttgatga tgtcccttcc tgcgttgttt
4981 aacatcggcc tctactctt cctagtcatg ttcactctac ccatctttgg gatgtccaac
5041 tttgcctatg ttaagagggg agttgggagc gatgacatgt tcaactttga gacctttggc
5101 aacagcatga tctgcctatt ccaaattaca acctctgctg gctgggatgg attgctagca
5161 cccattctca acagtaagcc acccgactgt gaccctaata aagttaaccc tggagactca
5221 gttaaggagg actgtgggaa cccatctgtt ggaattttct tttttgtcag ttacatcatc
```

```
5281 atatccttcc tggttgtggt gaacatgtac atcgcggtca tcctggagaa cttcagtgtt
5341 gctactgaag aaagtgcaga gcctctgagt gaggatgact ttgagatgtt ctatgaggtt
5401 tgggagaagt ttgatcccga tgcaactcag ttcatggaat ttgaaaaatt atctcagttt
5461 gcagctgcgc ttgaaccgcc tctcaatctg ccacaaccaa acaaactcca gctcattgcc
5521 atggatttgc ccatggtgag tggtgaccgg atccactgtc ttgatatctt atttgctttt
5581 acaaagcggg ttctaggaga gaggaggag atggatgctc tacgaataca gatggaagag
5641 cgattcatgg cttccaatcc ttccaaggct tcctatcagc caatcactac tactttaaaa
5701 cgaaaacaag aggaagtatc tgctgtcatt attcagcgtg cttacagacg ccacctttta
5761 aagcgaactg taaaacaagc ttcctttacg tacaataaaa acaaaatcaa aggtggggct
5821 aatcttctta taaaagaaga catgataatt gacagaataa atgaaaactc tattacagaa
5881 aaaactgac tgaccatgtc cactgcagct tgtccacctt cctatgaccg ggtgacaaag
5941 ccaattgtgg aaaaacatga gcaagaaggc aaagatgaaa aagccaaagg gaaataa
```

//

[Disclaimer](#) | [Write to the Help Desk](#)  
[NCBI](#) | [NLM](#) | [NIH](#)

Nov 3 2003 07:26:36